

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Tidewater Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Virginia Electric and Power Company – Southampton Power Station
Franklin, Virginia
Permit No. TRO-61093

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Virginia Electric and Power Company has applied for a Title V Operating Permit for its Southampton Power Station facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____

Date:

Air Permit Manager:_____

Date:

Regional Director:_____

Date:

FACILITY INFORMATION

Permittee

Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Facility

Southampton Power Station
30134 General Thomas Highway
Franklin, Virginia

County-Plant Identification Number: 51-175-00051

SOURCE DESCRIPTION

NAICS Code: 221112 – Fossil Fuel Electric Power Generation

The Southampton Power Station (SPS) is an electric generating facility that produces electricity for Dominion and process steam for sale to Hercules Chemical Plant. At maximum capacity, SPS produces 62.7 MW_{NET} of electricity and up to 95,000 lbs/hr of process steam. The Station includes two coal-fired stoker boilers with associated coal, lime, ash, and fuel oil handling systems, as well as several small diesel engine sources used to provide redundant or backup capability. Although coal is the primary fuel for the stoker boilers, each boiler can fire tall oil (from the Hercules Plant) or No. 2 fuel oil with coal and No. 2 fuel oil for startup and warm standby. One auxiliary boiler is located at SPS to provide steam to the host during times when the Station is not generating electricity.

The facility is a Title V major source of SO₂, NO_x, and CO. This source is located in an attainment area for all pollutants, and is a PSD major source. The facility was previously permitted under a PSD Permit dated December 5, 1996. The original PSD permit was issued on November 22, 1989, and was amended on November 12, 1992, June 20, 1995, February 6, 1996, and December 5, 1996. The facility is also permitted under NSR permits dated August 4, 1992, for the auxiliary boiler; November 8, 1993, for a distillate oil-fired boiler; February 20, 2002, for the Phase II Acid Rain permit; August 16, 2002, for the original Title V permit which was subsequently amended on January 12, 2004, to incorporate the provisions of the Phase II Acid Rain permit and the NO_x SIP provisions. The January 12, 2004, version of the Title V permit superseded the February 20, 2002, Phase II Acid Rain permit and the August 16, 2002, Title V permit.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity * | Pollution Control Device Description (PCD) | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|----------|---|---------------------------------|--|---------------------|---|------------------------|
| Fuel Burning Equipment / Utility Units | | | | | | | |
| 001 | 001 | Spreader Stoker Boiler #1 combusts Coal, Tall Oil & Coal, or No.2 Fuel Oil & Coal to generate steam for process use and electricity generation | 400 MMBTU/hour (nominal) | Overfire Air System – staged combustion; Lime Scrubber for reduction of SO ₂ ; and Fabric Filter Baghouse | EC-1a, EC-1b, EC-1c | NO _x , SO ₂ , PM-10, PM, Metals | December 5, 1996 |
| 002 | 001 | Spreader Stoker Boiler #2 combusts Coal, Tall Oil & Coal, or No. 2 Fuel Oil & Coal to generate steam for process use and electricity generation | 400 MMBTU/hour (nominal) | Overfire Air System – staged combustion; Lime Scrubber for reduction of SO ₂ ; and Fabric Filter Baghouse | EC-2a, EC-2b, EC-2c | NO _x , SO ₂ , PM-10, PM, Metals | December 5, 1996 |
| 004 | 004 | Auxiliary Boiler combusts tall oil or No. 2 fuel oil to produce steam for process use | 81.58 MMBTU/hour (nominal) | Low NO _x Burners | EC-4 | NO _x | December 5, 1996 |
| 006 | 006 | Auxiliary Diesel Generator | 1.4 MMBTU/hour 410 kW (nominal) | n/a | n/a | n/a | December 5, 1996 |

| | | | | | | | |
|-------------------------------------|----------|--|---|---------------------------|--------|-----------|------------------|
| 007 | 007 | Emergency Diesel Feedwater Pump | 1.23 MMBTU/hour 126 BHP (nominal) | n/a | n/a | n/a | December 5, 1996 |
| 008 | 008 | Diesel Firewater Pump Engine | 0.68 MMBTU/hour 208 BHP (nominal) | n/a | n/a | n/a | December 5, 1996 |
| 009 | 009 | Portable Diesel Air Compressor Engine | 0.49 MMBTU/hr 80 BHP (nominal) | n/a | n/a | n/a | December 5, 1996 |
| Coal, Ash, and Lime Handling | | | | | | | |
| 010a | FUGITIVE | Coal Unloading - railcar dumping to below grade hoppers | 400 tph | Dust Suppression Sprays | EC-10a | PM, PM-10 | December 5, 1996 |
| 010b | FUGITIVE | Coal Pile Stacking - coal stacker tube | 400 tph | n/a | n/a | n/a | December 5, 1996 |
| 010c | FUGITIVE | Reclaim Hopper Loading - front-end loader dump to grade mounted hopper | 150 tph | Dust Suppression Sprays | EC-10c | PM, PM-10 | December 5, 1996 |
| 010d | FUGITIVE | Coal Crushing Operations - coal crushers | 150 tph | Building Enclosure/Sprays | EC-10d | PM, PM-10 | December 5, 1996 |
| 010e | 010e | Coal Silo #1 - crushed coal storage | 180 tons 400 acfm | Bin Vent Filter | EC-10e | PM, PM-10 | December 5, 1996 |
| 010f | 010f | Coal Silo #2 - crushed coal storage | 180 tons 400 acfm | Bin Vent Filter | EC-10f | PM, PM-10 | December 5, 1996 |

| | | | | | | | |
|-------------------------|----------|---|-----------------------|--|--------|-----------|------------------|
| 010g | 010g | Coal Silo #3 - crushed coal storage | 180 tons 400 acfm | Bin Vent Filter | EC-10g | PM, PM-10 | December 5, 1996 |
| 010h | 010h | Coal Silo #4 - crushed coal storage | 180 tons 400 acfm | Bin Vent Filter | EC-10h | PM, PM-10 | December 5, 1996 |
| 010i | FUGITIVE | Coal Storage Pile – outdoor coal storage | 31,000 tons | n/a | n/a | n/a | December 5, 1996 |
| 011 | 011 | Ash conveying - A ash conveying blower | 27.8 tph | Baghouse | EC-11 | PM, PM-10 | December 5, 1996 |
| 012 | 012 | Ash conveying - B ash conveying blower | 27.8 tph | Baghouse | EC-12 | PM, PM-10 | December 5, 1996 |
| 013 | 013 | Ash conveying - C ash conveying blower | 27.8 tph | Baghouse | EC-13 | PM, PM-10 | December 5, 1996 |
| 014 | 014 | Recycle Ash Bin - recycle ash storage | 26.5 tons | Bin Vent Filter | EC-14 | PM, PM-10 | December 5, 1996 |
| 015 | 015 | Ash Silo - fly ash/bottom ash storage | 530 tons 2000 acfm | Bin Vent Filter | EC-15 | PM, PM-10 | December 5, 1996 |
| 016 | FUGITIVE | Ash Unloading Feeder - ash unloading | 60 tph | Ash Conditioning System - water sprays | EC-16 | PM, PM-10 | December 5, 1996 |
| 017 | 017 | Lime Silo - pebble lime storage | 135 tons | Bin Vent Filter | EC-17 | PM, PM-10 | December 5, 1996 |
| Fuel Oil Storage | | | | | | | |

| | | | | | | | |
|-----|----|---|----------------|-----|-----|-----|------------------|
| 018 | NA | Fuel Oil Storage - main No. 2 fuel oil storage tank | 42,000 gallons | n/a | n/a | n/a | December 5, 1996 |
|-----|----|---|----------------|-----|-----|-----|------------------|

*Size/rated capacity is provided for informational purposes only and is not an applicable requirement.

EMISSIONS INVENTORY

A copy of the 2004 annual emission update is attached. Emissions are summarized in the following tables.

2004 Actual Emissions

| | 2004 Criteria Pollutant Emission in Tons/Year | | | | |
|---------------|---|-------|-----------------|------------------|-----------------|
| Emission Unit | VOC | CO | SO ₂ | PM ₁₀ | NO _x |
| Facility-Wide | 2.61 | 58.92 | 127.74 | 7.27 | 719.92 |
| Total | 2.61 | 58.92 | 127.74 | 7.27 | 719.92 |

2004 Facility Hazardous Air Pollutant Emissions

| Pollutant | 2004 Hazardous Air Pollutant Emission in Tons/Yr |
|------------------------------|--|
| Total Non-VOC/Non-PM-10 HAPs | 24.29 |

EMISSION UNIT APPLICABLE REQUIREMENTS – Unit Ref. Nos. 001 and 002

Limitations

The following limitations from the PSD permit issued on December 5, 1996, have been included in the Title V permit:

Condition 17, limiting annual facilitywide coal throughput to 253,932 tons.

Condition 26, limiting NO_x emissions from the primary boilers each to 0.43 lbs/mmBtu during steam-firing only, 0.50 lbs/mmBtu during electricity generating only, 189.5 lbs/hour and 796 tons per year; limiting SO₂ emissions to 0.162 lbs/mmBtu, 61.3 lbs/hour, and 257 tons per year;

limiting PM-10 emissions to 0.018 lbs/mmBtu, 6.8 lbs/hour, and 29 tons per year; limiting PM emissions to 0.02 lbs/mmBtu; 7.6 lbs/hour, and 32 tons per year; limiting CO emissions to 0.20 lbs/mmBtu, 76.0 lbs/hour, and 318 tons per year; and limiting VOC emissions to 0.03 lbs/mmBtu, 11.4 lbs/hour, and 48 tons per year.

Condition 18, limiting facility-wide annual throughput of tall oil and No. 2 fuel oil combined to 5,879,518 gallons per year.

Condition 19, limiting each primary boiler to no more than 8,400 hours of operation per year.

Condition 4, requiring the use of an in-line multiple cyclone, a lime-water injection spray dryer, and a fabric filter rated at 99.9 percent control efficiency for the control of particulate emissions.

Condition 7, requiring the use of a water-lime injection spray dryer at 92 percent control efficiency for the control of SO₂ emissions.

Condition 8, requiring the use of a continuous coal feed system, staged combustion, and low excess air for the control of NO_x emissions.

Condition 35, limiting the units to use of approved fuels bituminous coal, No. 2 fuel oil, and tall oil.

Condition 36, limiting coal sulfur content to 1.3 percent maximum by weight per shipment.

Condition 37, limiting No. 2 fuel oil sulfur content to 0.3 percent maximum by weight.

Condition 38, limiting No. 2 fuel oil sulfur content to 0.2 percent annual average.

Condition 39, limiting tall oil sulfur content to 1.6 percent maximum.

Condition 33, limiting opacity from any fabric filter vent or exhaust duct not monitored by COMS to 5 percent as determined by EPA Reference Method 9.

Condition 31, limiting opacity from the primary boiler stacks to 10 percent except during one six minute period per hour not to exceed 27 percent opacity as determined by COMS or EPA Reference Method 9.

Condition 26, limiting hazardous air pollutant (HAP) emissions from the combined primary boilers.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

None. All applicable Virginia Administrative Codes that have specific emission requirements

have been superseded by more stringent federal requirements (NSPS) or PSD requirements.

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements in Condition numbers 4, 35-40, 47, 49, and 50 of the PSD permit issued on December 5, 1996, have been modified to meet Part 70 requirements.

Emissions of NO_x and SO₂ will be monitored through the use of CEMs operated in accordance with 40 CFR 60 Subpart Da. The units have been given an opacity requirement with a corresponding monitoring requirement utilizing COMS operated and maintained in accordance with 40 CFR 60.13.

Compliance with lb/mmBtu, lb/hour, and tons/year VOC and CO emission limits in Specific Condition 2 of the Title V permit shall be determined by the use of pollutant-specific emission factors (F-factors) and records of fuel throughput. The permittee is required to calculate hourly (including lb/mmBtu) emissions daily on a 30-day rolling average basis and annual emissions monthly as the sum of each consecutive 12-month period. The permittee has been given the option of demonstrating compliance with the short-term lb/mmBtu and lb/hour VOC and CO emission limitations by stack test. All stack tests shall be conducted according to appropriate EPA Reference Methods. The permittee must notify DEQ at least 30 days prior to conducting any stack test.

Compliance with the lb/hour and tons/year particulate (PM-10 and PM) emission limits in Specific Condition 2 of the Title V permit shall be demonstrated by the use of pollutant-specific emission factors (F-factors) and records of fuel throughput. The permittee has been given the option of demonstrating compliance with the short-term lb/hour PM-10 and PM emission limitations by stack test. All stack tests shall be conducted according to appropriate EPA Reference Methods. The permittee must notify DEQ at least 30 days prior to conducting any stack test. In addition, the permittee is required to demonstrate compliance by maintaining records of proper operation and maintenance of the cyclone, injection spray dryer, and fabric filter. Control efficiencies of the fabric filters will be demonstrated by records of proper operation and maintenance and by monthly visible emissions evaluations. The control efficiency rate of the water-lime injection spray dryer will be demonstrated on a 30-day rolling average basis based on CEMs data. The permittee is required to calculate hourly emissions daily on a 30-day rolling average basis and annual emissions monthly as the sum of each consecutive 12-month period.

Compliance with the tons/year NO_x and SO₂ emission limits in Specific Condition 2 of the Title V permit shall be demonstrated by the use of pollutant-specific emission factors (F-factors) and monthly records of fuel throughput. The permittee is required to calculate such emissions monthly as the sum of each consecutive 12-month period.

Hazardous Air Pollutant (HAP) emissions from the operation of each primary boiler when burning coal shall not exceed the limitations specified in Specific Condition 93 of the Title V permit, calculated daily as the sum of each 24-hour period, inclusive, ending at midnight of each calendar day. The permittee is required to demonstrate compliance with the HAP limitations

specified in Specific Condition 93 of the permit through the use of appropriate emission factors and daily coal throughput for each unit and maintain a record of such demonstration on site for inspection by DEQ personnel.

The facility will demonstrate compliance with the Phase II Acid Rain requirements through the applicable provisions of 40 CFR Parts 72, 73, and 75. The Phase II Acid Rain permit effective January 1, 2006, has been incorporated in its entirety by reference in the Title V permit as Appendix A.

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include daily tall oil to coal injection ratios; coal shipments received including sulfur and ash contents; No. 2 fuel oil shipments received including fuel supplier certifications indicating that fuel sulfur content does not exceed 0.3 percent by weight; all tall oil consumed and records of sulfur percentage derived from monthly analyses of weekly sampling of blended tall oil; fuel throughputs and annual hours of operation; annual hours of concurrent operation of the primary boilers and the auxiliary boiler; boiler load records for each of the primary boilers during concurrent operation with the auxiliary boiler; pollutant-specific emission factors and calculations used to demonstrate compliance with emission limitations; operation and maintenance records for the cyclone, spray dryer, and fabric filters; injection spray dryer efficiency rates; all fuel supplier certifications; all COMS data; visible emissions observations/evaluations; and any stack test results.

EMISSION FACTORS - All emission calculations used to determine compliance with the limitations set forth in the Title V permit shall use emission factors from AP-42, Volume 1, 5th Edition. Emission calculations for the primary and auxiliary boilers shall utilize the factors for criteria and hazardous air pollutants found in Chapter 1, Tables 1.1-3, 1.1-4, 1.1-5, 1.1-15, 1.1-16, 1.1-17, 1.1-18, and 1.3-1. Emission calculations for all internal combustion units shall utilize the factors for criteria pollutants in Chapter 3, Table 3.3-1.

Testing

The permit contains a requirement to perform a compliance test for the primary boilers once over the life of the permit term to determine compliance with the lbs/mmBtu particulate limitations in Specific Condition 2 of the Title V permit. A table of test methods has been included in the permit if additional testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The facility is required to submit quarterly excess emission reports for the primary boilers for NO_x and SO₂ as specified in Specific Conditions 26, 27, and 28 of the Title V permit.

Streamlined Requirements

A streamlining analysis of the particulate, SO₂, and NO_x emission standards and monitoring and reporting requirements of 40 CFR 60 Subpart Da was established prior to issuance of the initial

Title V permit for this facility. The initial streamlining analysis remains in effect for this permit renewal. The streamlining analysis compared established emission limitations and monitoring, recordkeeping, and reporting requirements of the PSD permit issued December 5, 1996, with the corresponding requirements of 40 CFR 60 Subpart Da. In all cases, the provisions of the PSD permit are at least as or more stringent than the applicable requirements of 40 CFR 60 Subpart Da. For multiple fuels scenarios, the analysis showed that the established emission limitations in the PSD permit are more stringent than the calculated emission limits for SO₂ and NO_x in 40 CFR 60.43a(h)(1) and (2) and 60.44a(c) for any of the permitted fuel ratio scenarios.

Compliance Assurance Monitoring (CAM) Plan (Unit Ref. Nos. 001 and 002)

The facility has submitted a proposed CAM plan for the two primary boilers pursuant to 40 CFR Part 64. These two units are the only two pollutant-specific emissions units at Southampton that meet all three criteria for potential applicability under the CAM program. Each unit is potentially subject to CAM for emissions of SO₂ and PM/PM-10. These units each have the potential to emit more than 100 tons per year of each of these pollutants for which emission limits apply and utilize control devices to comply with these limits. Although the units have the potential to emit more than 100 tons per year of NO_x and are subject to specific NO_x limits, CAM is not applicable for NO_x because NO_x emissions from these units are not controlled by "control devices" as defined in 40 CFR Part 64. Emissions of SO₂ from both primary boilers are controlled by lime spray dryers. Each unit is subject to the same emission limitation of 0.162 lbs SO₂ per million Btu on a 30-day rolling average basis and each unit has the potential to emit more than 100 tons per year of SO₂. Emissions of SO₂ are required to be continuously monitored using a continuous emissions monitoring system (CEMS). Each boiler is equipped with its own CEMS for SO₂. These meet the CAM definition of "continuous compliance determination method" found in 40 CFR 64.1. Because Specific Condition III.A.17 of the Title V permit requires the use of the CEMS to demonstrate compliance with the SO₂ emission limits, the exemption from CAM in 40 CFR 64.2(b)(vi) applies. Therefore, the CEMS are used in lieu of CAM and CAM does not apply to the SO₂ emission limits.

The facility has separate limits for PM and PM-10. Emissions of both pollutants from the primary boilers are controlled by baghouses and each boiler has the potential to emit 100 tons per year of both pollutants. There are no CEMS or other methods of determining continuous compliance for PM/PM-10 at this facility. Therefore, both units are subject to CAM for both PM and PM-10. Stack testing in the past has demonstrated an ample margin of compliance with the PM and PM-

10 emission limitations in the Title V permit. Stack test results are an order of magnitude lower than the most restrictive emission limit. CAM is designed to provide data that “provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations” at an emissions unit. Because the tested emissions from this facility are within the respective emission limits, the facility has proposed that opacity measured by the continuous opacity monitoring system (COMS) will be adequate to meet the requirements of CAM for both PM and PM-10. There are special criteria in the CAM program for the use of continuous monitoring systems, including COMS. First, if the use of a COMS is required pursuant to other authority under the Act, then the use of COMS is required to satisfy CAM. In this case, the use of a COMS is required by the applicable NSPS and is therefore required as an element of the CAM program as specified in 40 CFR 64.3(d)(1). Second, the use of COMS that are installed in accordance with NSPS requirements is automatically deemed to satisfy the general design criteria of the CAM program as specified in 40 CFR 64.3(d)(2)(ii).

For the reasons discussed above, the permittee has proposed that SO₂ and NO_x emissions are exempt from CAM and that continued operation of the COMS and its associated QA/QC procedures and reporting requirements already contained in the facility’s Title V permit satisfies the requirement for CAM for both PM and PM-10 emissions from this facility. CAM regulatory citations have been included in Specific Conditions 19 and 25 of the Title V permit. DEQ therefore accepts the facility’s proposed CAM plan as outlined in the Title V renewal application dated June 28, 2005.

EMISSION UNIT APPLICABLE REQUIREMENTS – Unit Ref. No. 004

Limitations

The following limitations from the PSD permit issued on December 5, 1996, have been included in the Title V permit:

Condition 27, limiting NO_x emissions from No. 2 fuel oil to 0.1 lbs/mmBtu and 8.2 lbs/hour; NO_x emissions from tall oil to 0.65 lbs/mmBtu and 53.0 lbs/hour; SO₂ emissions from No. 2 fuel oil to 0.31 lbs/mmBtu and 25.3 lbs/hour; SO₂ emissions from tall oil to 1.16 lbs/mmBtu and 94.3 lbs/hour; PM₁₀ emissions from No. 2 fuel oil to 0.03 lbs/mmBtu and 2.4 lbs/hour; PM₁₀ emissions from tall oil to 0.12 lbs/mmBtu and 9.8 lbs/hour; PM emissions from No. 2 fuel oil to 0.04 lbs/mmBtu and 3.3 lbs/hour; PM emissions from tall oil to 0.16 lbs/mmBtu and 13.1 lbs/hour; CO emissions from No. 2 fuel oil to 0.082 lbs/mmBtu and 6.7 lbs/hour; CO emissions from tall oil to 0.12 lbs/mmBtu and 9.8 lbs/hour; VOC from No. 2 fuel oil to 0.041 lbs/mmBtu and 3.3 lbs/hour; and VOC from tall oil to 0.07 lbs/mmBtu and 5.7 lbs/hour.

Condition 5, requiring particulate emissions from the auxiliary boiler to be controlled by combustion efficiency.

Condition 21, outlining conditions for concurrent operation of the auxiliary boiler with the primary boilers.

Condition 18, limiting annual throughput of tall oil and No. 2 fuel oil.

Condition 31, limiting opacity as determined by COMS to 10 percent except during one six-minute period per hour not to exceed 27 percent.

Condition 40, limiting the approved fuels for the auxiliary boiler to tall oil and No. 2 fuel oil.

Condition 41, limiting the maximum sulfur content for tall oil to 0.88 percent and to 0.3 percent for No. 2 fuel oil.

Condition 42 limiting the average sulfur content for tall oil to 0.52 percent and to 0.2 percent for No. 2 fuel oil.

Condition 52, requiring the stack height for the auxiliary boiler to be at least 200 feet or greater.

Monitoring and Recordkeeping

The permittee shall calculate emissions of NO_x, SO₂, PM-10, TSP, CO, and VOC daily on a 30-day rolling average basis using appropriate pollutant-specific emission factors (F-factors), hourly records of boiler heat input, and hourly throughput of tall oil and No. 2 fuel oil to demonstrate compliance with the emission limitations set forth in Specific Condition 36 of the Title V permit. The permittee is required to calculate lb/mmBtu SO₂ emissions in accordance with approved procedures outlined in 40 CFR 60.44c(e). Compliance with the lb/mmBtu SO₂ emission limitations set forth in Specific Condition 36 of the Title V permit will be demonstrated by compliance with the SO₂ emission monitoring procedures outlined in 40 CFR 60.46c(d) or (e). If the permittee elects to follow the compliance procedures of 40 CFR 60.46c(e), the permittee shall obtain fuel supplier certifications as provided in 40 CFR 60.48c(f).

A continuous emission monitor will be used to measure and record the opacity from the auxiliary boiler. It shall be maintained and calibrated in accordance with approved procedures (reference to 40 CFR 60.13).

The source is also required to maintain records of tall oil and No. 2 fuel oil throughput and percent sulfur records for both fuels for the auxiliary boiler.

Testing

The permit contains no requirements to perform testing for the auxiliary boiler. A table of test methods has been included in the permit if additional testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The facility is required to submit quarterly reports for the auxiliary boiler for SO₂ emissions as specified in Specific Conditions 49 of the Title V permit.

EMISSION UNIT APPLICABLE REQUIREMENTS – Unit Ref. Nos. 001, 002, and 004

(Combined)

Limitations

The following limitations from the PSD permit issued on December 5, 1996, have been included in the Title V permit:

Condition 28, limiting combined emissions of NO_x to 1,601.5 tons/year; SO₂ to 531.0 tons/year; PM-10 to 59.8 tons/year; PM to 66.3 tons/year; CO to 637.8 tons/year; and VOC to 97.0 tons/year.

All other limitations for the combined boilers have been accounted for previously in this document under the individual limitations for the primary boilers (Unit Ref. Nos. 001 and 002) and the auxiliary boiler (Unit Ref. No. 004).

Monitoring and Recordkeeping

The permittee shall calculate combined annual emissions from the two primary boilers (Unit Ref. Nos. 001 and 002) and the auxiliary boiler (Unit Ref. No. 004) monthly as the sum of each consecutive 12-month period. The permittee is required to maintain records of hours of concurrent boiler operation (primary and auxiliary) and primary boiler load during times of concurrent operation with the auxiliary boiler. The permittee is required to utilize appropriate pollutant-specific emission factors (F-factors) and monthly coal, No. 2 fuel oil, and tall oil throughputs to demonstrate compliance with the emission limitations set forth in Specific Condition 57 of the Title V permit.

Testing

The permit contains no requirements to perform additional testing for the combined boilers other than that prescribed for the boilers individually elsewhere in this document. A table of test methods has been included in the permit if additional testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No additional reporting requirements have been established for the combined boilers other than those prescribed for the boilers individually elsewhere in this document.

EMISSION UNIT APPLICABLE REQUIREMENTS – Unit Ref. Nos. 006, 007, 008, and 009

Limitations

The following limitations from the PSD permit issued on December 5, 1996, have been included in the Title V permit:

Condition 30, limiting NO_x emissions from Unit Ref. No. 006 (auxiliary diesel generator) to 6.2 lbs/hour and 1.0 tons/year.

Condition 25, limiting Unit Ref. No. 006 to no more than 336 hours per year of annual operation calculated monthly as the sum of each consecutive 12-month period.

Condition 22, limiting Unit Ref. No. 007 to no more than 116 hours per year of annual operation calculated monthly as the sum of each consecutive 12-month period.

Condition 23, limiting Unit Ref. No. 008 to no more than 116 hours per year of annual operation calculated monthly as the sum of each consecutive 12-month period.

Condition 24, limiting Unit Ref. No. 009 to no more than 220 hours per year of annual operation calculated monthly as the sum of each consecutive 12-month period.

Condition 32, limiting opacity from Unit Ref. No. 006 to 10 percent except for during one six-minute period per hour in which opacity shall not exceed 20 percent as determined by EPA Reference Method 9.

Condition 45, limiting the approved fuel for Units Ref. Nos. 006, 007, 008, and 009 to distillate oil.

Condition 46, limiting the maximum sulfur content of the fuel oil to be burned in Unit Ref. Nos. 006, 007, 008, and 009 to 0.3 percent by weight per shipment.

Monitoring and Recordkeeping

NO_x emissions from the auxiliary diesel generator (Unit Ref. No. 006) shall not exceed the limitations specified in Specific Condition 67 of the Title V permit. The permittee is required to calculate annual NO_x emissions monthly as the sum of each consecutive 12-month period using monthly hours of operation and pollutant-specific AP-42 emission factors (F-factors) or other appropriate unit-specific factor (manufacturer specifications). The permittee is required to make a one-time demonstration of maximum hourly NO_x emissions from the auxiliary diesel generator using manufacturer specifications for maximum heat input (or power output) and appropriate AP-42 emission factors or manufacturer test data. The permittee is required to maintain a record of this one-time demonstration of maximum hourly NO_x emissions on-site for the life of the unit.

The permittee is required to perform a monthly visible emissions evaluation of the stack of the portable auxiliary diesel generator (Unit Ref. No. 006) while the unit is in operation to determine

compliance with the opacity limitation of ten (10) percent. The permittee shall log each evaluation in a logbook. If any visible emissions are present, the permittee is required to record the incident in a logbook and undertake corrective action. Following corrective action, the permittee is required to re-evaluate visible emissions until such time that a no visible emissions condition exists and record the incident in a logbook.

Additional records to be maintained by the permittee are annual hours of operation for Unit Ref. Nos. 006, 007, 008, and 009 calculated monthly as the sum of each consecutive 12-month period; all fuel supplier certifications; and any visible emissions observations/evaluations.

Testing

The permit contains no requirements to perform testing for Unit Ref. Nos. 006, 007, 008, and 009. A table of test methods has been included in the permit if additional testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting requirements have been established for Unit Ref. Nos. 006, 007, 008, and 009.

EMISSION UNIT APPLICABLE REQUIREMENTS – Unit Ref. Nos. 010a-i, 011- 017, and 018

Limitations

The following limitations from the PSD permit issued on December 5, 1996, have been included in the Title V permit:

Condition 29, limiting PM₁₀ emissions to 0.20 lbs/hour and 0.50 tons/year and PM emissions to 0.27 lbs/hour and 0.62 tons/year for Unit Ref. Nos. 010a-I, 011-017, and 018 combined.

Condition 6, requiring particulate emissions to be controlled by bag filters.

Condition 9, requiring the use of wet suppression to control particulate emissions from Unit Ref. Nos. 010.a., 010.c., and 010.d.

Condition 10, requiring the control of lime slaker emissions by a Portec dust suppression aspirator and a venturi scrubber.

Condition 11, requiring fugitive dust emissions from the coal crusher (Unit Ref. No. 010.d.) to be controlled by enclosure.

Condition 12, requiring fugitive dust emissions from Unit Ref. No. 010.c. to be controlled by wet suppression and surfactant as necessary.

Condition 13, requiring enclosed belt feed conveyors for Unit Ref. Nos. 010.e., f., g., and h.

Condition 14, requiring the discharge from the ash and FGR product storage silo (Unit Ref. No. 016) to be mixed with water to minimize fugitive emissions.

Condition 15, requiring coal stockpiles to be moist or treated with wet suppression or surfactant as necessary.

Condition 16, requiring fugitive emissions from facility access roads to be paved.

Condition 33, limiting visible emissions from any fabric filter vent or exhaust duct to 5 percent opacity.

Condition 43, limiting the storage tank (Unit Ref. No. 018) to storing No. 2 fuel oil only.

Monitoring and Recordkeeping

Compliance with hourly and annual particulate emissions is demonstrated through the use of work practice related controls - bag filters at transfer points, enclosures where appropriate, and wet suppression. The Performance Test for Coal Handling and Processing Equipment dated December 23, 1997, and submitted to DEQ on December 29, 1997, completes the requirement for opacity testing of Unit Ref. Nos. 010.a. through h. as required by 40 CFR 60 Subpart Y (reference 40 CFR 60.254). The results of this performance test indicated 0% (zero percent) opacity for all affected units as determined by EPA Method 9. Therefore, the permittee is considered to be in compliance with the testing requirements of 40 CFR 60.254 and with the opacity and particulate matter requirements of 40 CFR 60.252(c). The permittee is required to maintain a record of this performance test on-site and available for inspection for the life of the affected units. The facility is also required to maintain records of process throughputs and annual hours of operation as well as all fuel supplier certifications.

The fuel oil storage tank (Unit Ref. No. 18) is subject only to the recordkeeping provisions of 40 CFR 60 Subpart Kb. The facility is required to maintain a record of the tank's dimensions on-site for the life of the vessel. As of October 15, 2003, Subpart Kb no longer applies to this unit. However, the requirement to maintain vessel dimension records remains in the permit.

Testing

The permit contains no requirements to perform testing for Unit Ref. Nos. 010a-i, 011-017, and 018. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting requirements have been established for Unit Ref. Nos. 010a-i, 011-017, and 018.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cite(s) the Article(s) that follow(s):
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-80. Application
9 VAC 5-80-140. Permit Shield
9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

This general condition cites the sections that follow:

- 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
- 9 VAC 5-40-50. Notification, Records and Reporting
- 9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:
40 CFR 60.13 (h). Monitoring Requirements.

J. Permit Modification

This general condition cites the sections that follow:

- 9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
- 9 VAC 5-80-190. Changes to Permits.
- 9 VAC 5-80-260. Enforcement.
- 9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
- 9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
- 9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

- 9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
- 9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:

- 40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
- 40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
- 40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

Odor (9 VAC 5 Chapter 40, Article 2)
State toxics rule (9 VAC 5 Chapter 60)
(9 VAC 5-80-490 N and 9 VAC 5-80-700)

FUTURE APPLICABLE REQUIREMENTS

This facility will be subject to two recently finalized federal regulations. These are the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR). Regulations implementing these rules have not yet been promulgated in Virginia at the time of this Title V permit renewal. The Title V permit will be re-opened at a future date to include these future requirements.

INAPPLICABLE REQUIREMENTS

The initial notification and initial testing requirements listed in the New Source Review permits previously issued for this source are obsolete and are not applicable. These requirements have not been included in the Title V permit. The requirements of 40 CFR 60 Subpart Kb no longer apply to this facility as of October 15, 2003.

COMPLIANCE PLAN

No compliance plan is currently required for this facility.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

| Emission Unit No. | Emission Unit Description | Citation (9 VAC_) | Pollutant Emitted (5-80-720 B.) | Rated Capacity (5-80-720 C.) |
|-------------------|--------------------------------|-------------------|---------------------------------|------------------------------|
| ISU-1 | Turbine Lube Oil Reservoir | 5-80-720 B.1. | VOC | NA |
| ISU-2 | Solvent Based Parts Washer | 5-80-720 B.1. | VOC | NA |
| ISU-3 | Used Oil Tank | 5-80-720 C.2.a. | VOC | 500 gallons |
| ISU-4 | Oil/Water Separator (Oil Sump) | 5-80-720 C.2.a. | VOC | 280 gallons |

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the Franklin *Tidewater News* from November 14, 2005, to December 13, 2005.